

In re Patent Application of:
NEWTON ET AL.
Serial No. 10/827,004
Filing Date: April 19, 2004

In the Claims:

Claims 1-12 (CANCELLED)

13. (CURRENTLY AMENDED) A radio frequency switch circuit comprising:

a radio frequency input;

a control input;

a radio frequency output; and

a microelectromechanical switch connected to said radio frequency input and output and control input and comprising

a multilayer ceramic substrate having embedded microstrip and interconnect structures among different layers;

a low loss photodefinable dielectric planarizing layer formed over the ceramic substrate;

a photodefined conductor printed over the low loss dielectric planarizing layer and formed into a switch, and further comprising a biasing actuator connected to said control input, and a deflectable member formed over the biasing actuator and movable into a closed circuit position upon actuation of said control input and operatively connected to said radio frequency input and output when in the closed circuit position.

14. (ORIGINAL) A microelectromechanical structure according to Claim 13, and further comprising a sacrificial layer formed over said low loss photodefinable dielectric layer and formed with the photodefined conductor into a structural circuit component.

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15. (ORIGINAL) A microelectromechanical structure according to Claim 13, wherein said low loss photodefinaible dielectric planarizing layer is formed as a sacrificial layer.

16. (ORIGINAL) A radio frequency switch circuit according to Claim 13, wherein said deflectable member is formed as a cantilever beam.

17. (ORIGINAL) A radio frequency switch circuit according to Claim 13, wherein said deflectable member is formed as a suspended beam.

18. (ORIGINAL) A radio frequency switch circuit according to Claim 13, wherein said photodefined conductor further comprises an input signal line connected to said radio frequency input and output signal line connected to said radio frequency output that transfer current when said switch is in the closed position.

19. (ORIGINAL) A radio frequency switch circuit according to Claim 13, wherein said photodefined conductor comprises a thick film conductor.

20. (ORIGINAL) A radio frequency switch circuit according to Claim 13, wherein said low loss photodefinaible dielectric planarizing layer is formed from a borosilicate based thick film dielectric material.

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21. (ORIGINAL) A radio frequency switch circuit according to Claim 13, wherein said photodefinable dielectric planarizing layer has a dielectric constant of about 3.8 to about 4.2.

22. (ORIGINAL) A radio frequency switch circuit according to Claim 13, wherein said photodefinable dielectric planarizing layer has a loss factor of about 0.01%.

23. (ORIGINAL) A radio frequency switch circuit according to Claim 13, wherein said ceramic substrate is formed from ceramic sheets that are stacked and co-fired together.

24. (ORIGINAL) A radio frequency switch circuit according to Claim 13, wherein said control input further comprises a transistor.

Claims 25-37 (CANCELLED)